

FlexiSensor: Flexible Thin-film Pressure Sensor

ASTRI's FlexiSensor is a breakthrough in printed flexible thin-film pressure sensors. Designed for adaptability, it enables continuous pressure monitoring in diverse products. Using a proprietary composite sensing material, adjustable to meet various pressure range requirements, it can be customised as a single sensor to measure pressure at a specific location, or fabricated as a sensor array to observe pressure distribution over a large area.

Industry Challenges

- Traditional pressure sensors are rigid and fixed in shape, making integration with flexible devices challenging
- High manufacturing costs and complexity limit widespread adoption
- Inconsistent performance across different scenarios restricts practical applications and versatility

Major Benefits

- Customisable in size and shape
- Flexible, bendable and durable
- Highly sensitive, highly accurate, and adaptable to a broad pressure range
- Real-time monitoring of static and dynamic pressure distribution
- Cost-effective with a simple manufacturing process

Application Areas

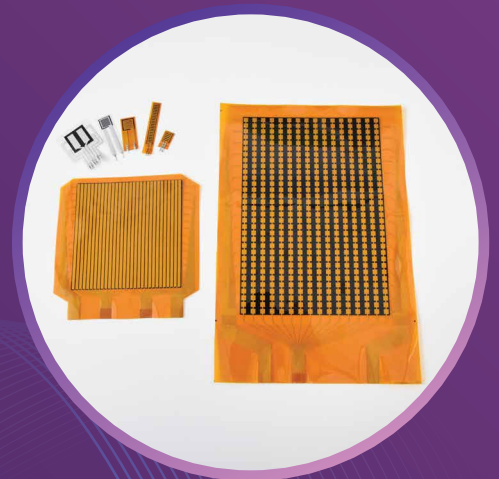
- Intelligent robots and humanoid robots
- Consumer electronics and smart wearables
- Medical and health monitoring
- Automotive electronics

Collaborator(s)

Smart device hardware manufacturers (optics and precision engineering), public transportation company, and advanced materials R&D and trading enterprise

Award(s)

CES Innovation Awards,
International Exhibition of Inventions Geneva



Flexible printed thin-film pressure sensors and sensor arrays tailored to various shapes and sizes for seamless integration across diverse applications

